NOTE ON ECHIDNOPSIS SQUAMULATA (DCNE) BALLY (SOUTHERN ARABIA)

With an Amplified Description

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(With Plates VI and VII)

In the year 1837, the botanist Paul-Emile Botta was sent by the French Museum of Natural History to the Yemen. He made fairly extensive collections in the southern sector of the Western Yemeni escarpment and in the mountains and plateaux surrounding the town of Ta'izz.

The important collections made by Botta were dealt with, in part, by Decaisne in *Ann. Sc. Nat.* (1838) 257–278 and 321–348 and in *Arch. mus. d'hist. nat. Paris* 2 (1841) 89–199 but the work was, unfortunately, never completed.

During a botanical journey to South Western Arabia in August, 1962, I collected, on the Audhali Plateau, some 140 miles N.E. of Aden, a plant belonging to the genus *Echidnopsis* Hook. f., with long, tubular flowers (Lavranos 1822). When I sent photographs of this plant to Mr. P. R. O. Bally, at Geneva, he drew my attention to one of Botta's plants described by Decaisne in *Ann. Sc. Nat.* (1838) 263, as *Ceropegia squamulata* Dcne. and which appeared to conform rather closely with the plants found by me on the Audhali Plateau. Mr. Bally thought that the two might be conspecific.

Botta's plant was, in fact, described as having stems "teretibus, squamulosis, squamulis spiraliterque dispositis", a description reminiscent rather of *Echidnopsis* than of *Ceropegia;* the corolla is stated to be urceolate with triangular lobes connate at their tips.

Decaisne, in his comments on the species, (*l.c.*) states that he intended to create a new genus based on this plant, but that thorough comparison with material from India led him, in the end, to attribute it to *Ceropegia.*

It may be noted that Decaisne described his species from herbarium material only and those who have had experience of the deformations which the flowers of succulent Asclepiadaceae are subject to when dried and pressed, will realise that a description based solely on such material may contain certain discrepencies. Moreover, the only flower available is in shreds through dissecting and it is now very difficult indeed to form an exact opinion of its original shape. One has, therefore, to rely on the drawing which accompanies the description (*l.c.* Plate 9–B).

Prof. H. Huber, in *Revision der Gattung Ceropegia, Mem. Soc. Brot.* 12; 177 (1957) mentions Decaisne's *Ceropegia squamulata* among his *species excludendae* and points to its probable affinity with the genus *Echidnopsis*. Mr. Bally (Conservatoire Botanique de L'Université, Geneva) examined the type sheet in Paris, in January 1963 and confirmed this identification. He subsequently published the new combination, *Echidnopsis squamulata* in *Deutsche Sukkulentenzeitschrift* (*Kakteen und andere Sukkulenten*), 14 (9), 173–174 (1963).

By courtesy of the French Museum of Natural History, Paris, I was able to examine the type sheet of the species when it was sent to the Division of Botany, Pretoria, where it was photographed.

In March, 1963, another plant of *Echidnopsis* (Lavranos 1869) from near Dhala in the Amiri highlands North of Aden, produced a single flower which conforms, in almost every respect, with Decaisne's description.

It is now possible to give a more complete description of this species, based on Lavranos 1869.

Echidnopsis squamulata (Decaisne) Bally in *Deutsche Sukkulentenzeitschrift* (*Kakteen u.a. Sukkulenten*), 14(9), 173–174 (1963). *Ceropegia squamulata* Dcne., in *Ann. Sc. Nat., Paris*, (1838) 263 *cum tab.* 9(B); Deflers in *Voyage au Yemen* (1889) 167; in *Mém. Inst. Egypte*, 3 (1896) 265; Blatter in *Flora Arabica-Rec. Bot. Surv. Ind.*, (1919–1936) 300; O. Schwartz in *Fl. Trop. Arab. -Mitt. Inst. Allg. Bot. Hamburg*, (1939) 192; H. Huber in *Mem. Soc. Brot.* 12 (1957) 177.

DESCRIPTION

Stems 7—8 angled, tuberculate-tesselate, procumbent, forming dense mats, up to 15 cm. long, 8 mm. diam., grey-green with a brownish tinge, densely but minutely setulose throughout.

Leaves 1 mm. long ovate-deltoid, soon deciduous.

Flowers in pairs on new growth of stems, developed successively.

Pedicel terete, glabrous, 5—6 mm. long, 1 mm. diam., pale green, densely covered with minute reddish-brown spots.

Sepals lanceolate, acute, 3 mm. long, somewhat reflexed, glabrous, pale green with minute reddish-brown spots.

Corolla urceolate, obscurely 5-angled in section, 14 mm. long, 5 mm. diam. at its widest point above the base, narrowing gradually to 2 mm. below the mouth, thereafter expanding to 4 mm. between apices of lobes; *outer surface* of tube, uniformly red-brown, glabrous, vernicose; *inner surface* glabrous, red-brown; *lobes* broadly deltoid, acute appr. 2 mm. broad at base and 2·5 mm. long, ascending towards the centre, the apices bent abruptly outward, red-brown inside, greenish yellow outside with numerous small red-brown spots.

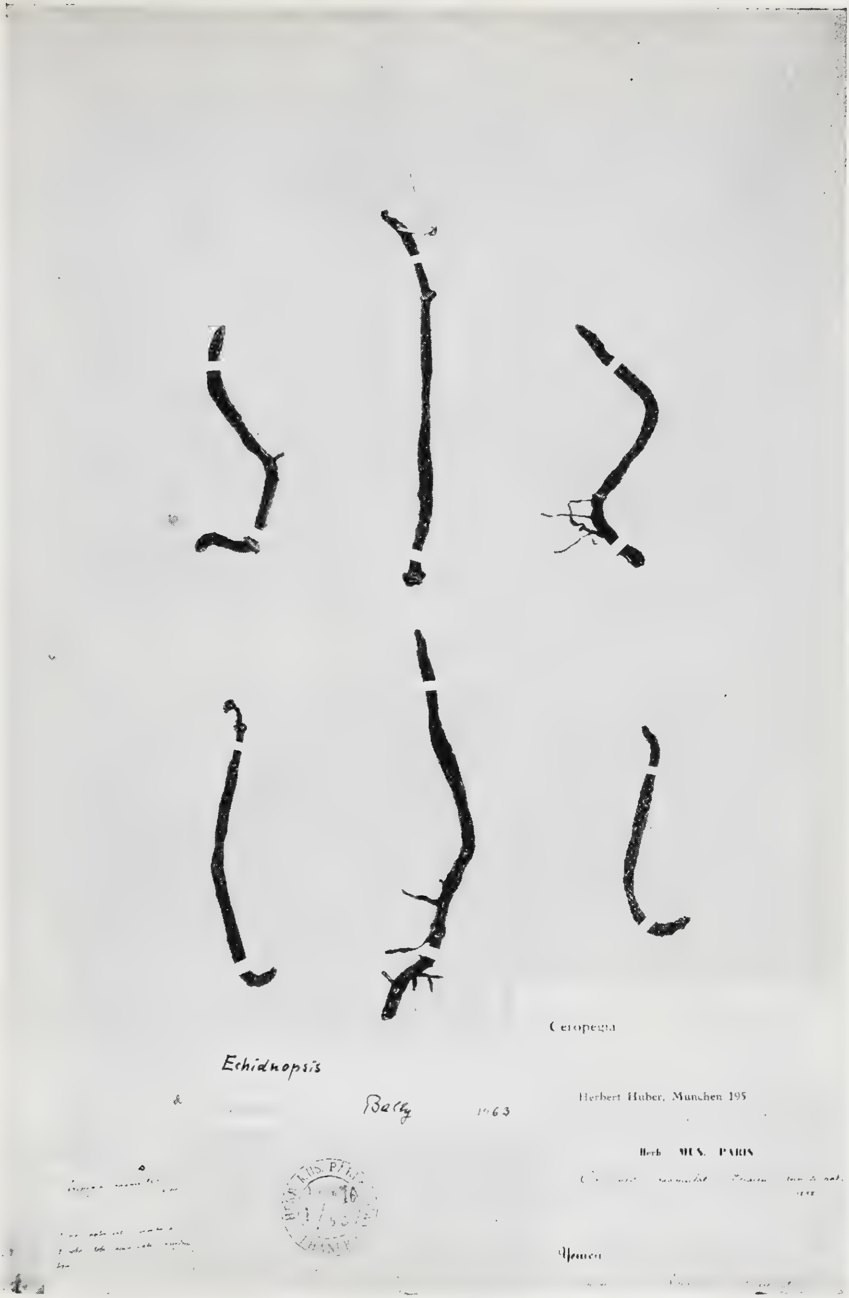


PLATE VI.

E. squamulata (Decaisne) Bally. The type sheet.
Photo: Division of Botany, Pretoria.

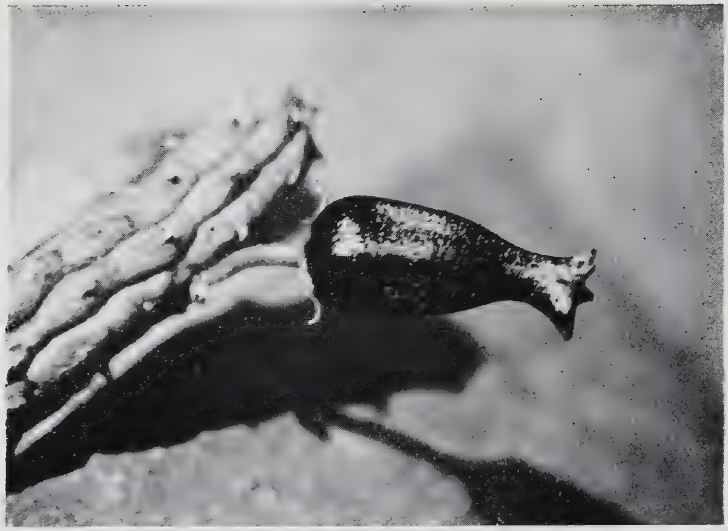


Fig. 1. Bud.

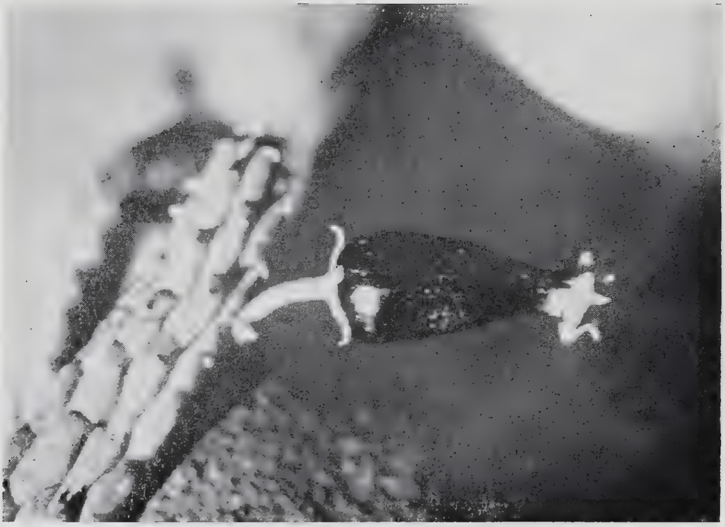


Fig. 2. Mature flower.

Plate VII. *Euphorbia squamulata* (Dcne) Bally.

Outer corona 3·5 mm. diam., appr. 2 mm. high, cupular, obtusely 5-lobed, glabrous, red-brown, with entire, revolute margin, internally divided into 5 compartments by the inner corona lobes.

Inner corona lobes linear, subulate, ascending at first and incumbent upon the anthers, thereafter connivent in an erect column, pale pink at first, darker towards the apices which are not divergent.

DISTRIBUTION: Yemen, in Wadi Sina, near Ta'izz, anno 1837, leg. P.-E. Botta, type (P); 4 miles N.E. of Dhala in the Amiri highlands, lat. 13° 43′ N., long. 44° 46′ E., south of the Yemeni border, alt. appr. 1450 m. Lavranos 1869, coll. Aug. 24 1962, fl. Johannesburg March 25 1963 (PRE). The species appears to occur on the basalt plateaux between Dhala and Ta'izz, a distance of some 50 miles, at altitudes in the vicinity of 1500 m.

Decaisne describes the corolla lobes of *Ceropegia squamulata* as coalescent at their apices (apice coalescentibus). It would seem that the only flower collected by Botta was an almost mature bud and that, consequently, the corolla lobes appeared—in the dried and pressed specimen—to be coalescent. A comparison of the original drawing and the photograph of a bud which accompany this text seems to corroborate this view.

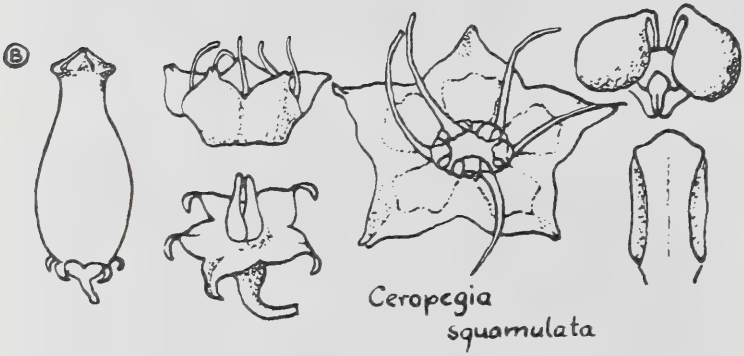
The outer corona is not rotate but cupular. In the original drawing it appears to be more deeply lobed than in the specimens collected by me. This may be due to variability in the development of the outer corona lobes but it could also be caused by shrinkage in the process of drying.

The original drawing shows the inner corona lobes as erect from their base. This may be attributed to the deformations suffered by the flower in the press.

While Botta's plant was collected in the Wadi Sina near Ta'izz in the Yemen, my own specimen was found near Dhala, some 50 miles to the East, at about the same altitude and in almost identical conditions of climate, soil and vegetation.

My plant was found growing on a low hill of basaltic rock in a association with *Aloe* sp., an *Euphorbia* of the sect. *Diacanthium*, (possibly *E. parciramulosa* Schweinf.), *Arisaema flavum* (Forsk.) Schott, *Dorstenia* cf. *barnimiana* Schweinf., *Anisotes trisulcus* (Forsk.) Nees, and *Senecio anteuphoribum* (L) Sch. Bip. var. *odorus* (Forsk.) Rowley.

The taxonomic position of the plants from the Audhali Plateau (Lavranos 1822, 1823, 1830, 1841 and 1848) is not yet clear. They—and possibly also Lavranos 1759, collected on the arid Jahhayn flats—may eventually prove to belong to *E. squamulata*. It is hoped that this matter will be settled once flowering material from the above collection numbers becomes available for comparison. Fortunately all these plants are at present in cultivation.



aus: Annales des Sciences Naturelles 1838
2de. Ser.
Tome IX
Pl. 9

E. squamulata.

The original drawing by Decaisne.

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